L14: Entry 27 of 34 File: USPT May 10, 1988

DOCUMENT-IDENTIFIER: US 4743361 A
TITLE: Manipulation of particles

BSPR:
The invention may be used for the analysis and separation of a very wide size range of particles. Among examples of suitable biological particles there can be considered animal cells, for instance mammalian cells. Thus, it is possible to employ the method to distinguish between red blood cells (7 microns) which have a density of 1.09 gm/cc and are disc shaped, and reticulocytes which are immature red cells (5 microns) and have a distinctive internal structure and acoustic character, and other blood particulates such as neutrophils (10 microns), monocytes (14-20 microns) and lymphocytes (10 microns). Other suitable biological particles for treatment are plant cells (typically 20-30 microns), microorganisms (a typical coccus being about 1-2 microns in diameter while a bacillus is rod-shaped about 2-3 microns long), and spores of microorganisms which are much denser (specific gravity 1.3) than when in the vegitative state. Cell constituents such as nuclei, mitachondria and microsomes are further examples of biological particles that can be treated using the method of the present invention, and as further instances may be mentioned plankton, yeasts, pollen, protozoa, richetsia and viruses.

Trichomonas vaginalis weakens human amniochorion in an in vitro model of premature membrane rupture

Draper, D.; Jones, W.; Heine, R.P.; Beutz, M.; French, J.I.; McGregor, J.A.
Univ. Pittsburgh, Magee-Womens Res. Inst., 204 Craft Ave., Rm. 530, Pittsburgh, PA 15213, USA

INFECT. DIS. OBSTET. GYNECOL. vol. 2, no. 6, pp. 267-274 (1994-1995)
ISSN: 1064-7449
DOCUMENT TYPE: Journal article LANGUAGE: ENGLISH
SUBFILE: Microbiology Abstracts C: Algology, Mycology & Protozoology

Objective: Trichomonas vaginalis (TV) infection is associated with preterm rupture of membranes (PROM) and preterm birth. We evaluated the effects of TV growth and metabolism on preparations of human amniochorion to understand and characterize how TV may impair fetal-membrane integrity and predispose to PROM and preterm birth. Methods: Term fetal membranes were evaluated using an established in vitro fetal-membrane model. Fresh TV clinical isolates were obtained from pregnant women. The **protozoa** (5.0 x 10 super(5) to 1.5 x 10 super(6)/ml) were incubated with fetal membranes in modified **Diamond** 's medium for 20 h at 37 degree C in 5% CO sub(2). The effects of fetal-membrane strength (bursting tension, work to rupture, and elasticity) were measured using a calibrated Wheatstone-bridge dynamometer. Tests were also performed to evaluate the effects of 1) inoculum size 2) metronidazole (50 mu g/ml) and 3) cell-free filtrate. Results: The TV-induced membrane effects were 1) isolate variable 2) inoculum dependent 3) incompletely protected by metronidazole and 4) mediated by both live organisms as well as protozoan-free culture filtrates. Six of 9 isolates significantly reduced the calculated work to rupture (P less than or equal to 0.02) 7 of 9 reduced bursting tension and 1 of 9 reduced elasticity. One isolate significantly increased the work to rupture and bursting tension (P less than or equal to 0.002). Conclusions: In vitro incubation of fetal membranes with TV can significantly impair the measures of fetal-membrane strength. This model may be used to delineate the mechanisms of TV-induced membrane damage. This study suggests that there are enzyme-specific effects as well as pH effects.

DESCRIPTORS: Trichomonas vaginalis; amnion; membranes; chorion; man
SECTION HEADING: 03090 -- Protozoa: human

The Quantitative Analysis of Phagocytosis in Paramecium caudatum Ehrbg. Spirostomum ambiguum Ehrbg.

Railkin, A.I.
Lab. Invert. Zool., Biol. Res. Inst., Leningrad State Univ., Leningrad 164, USSR

ACTA PROTOZOOL. vol. 20, no. 3, pp. 255-280 (1981.)
DOCUMENT TYPE: Journal article LANGUAGE: RUSSIAN SUMMARY LANGUAGE: ENGLISH
SUBFILE: Microbiology Abstracts Section C: Algology, Mycology and Protozoology

The influence of variety of physical and chemical factors on the rate of phagocytosis of **diamond** and bentonite particles in P. caudatum and S. ambiguum was studied. The rate of food vacuole formation is independent on dimensions of particles when they are not greater than 5 mu m for Paramecium and 7 mu m for Spirostomum . The optimum density of both particles and **protozoa** concentrations in the medium, in which the highest rate of phagocytosis occurs, is noted. In more dense concentrations decreasing of phagocytic activity is observed. Experimental relation between mean time (t super(-)) of one food vacuole formation and mean number of particles (n super(-)) inside vacuole (n super(-) x t super(-) = const) is calculated. Working hypothesis of subthreshold stimuli summation is suggested. The single particle of suspension acting as subthreshold stimulus on the receptor inside oral apparatus (cytostome) of the ciliate cannot be effective as a trigger in the process of food vacuole formation. The sum of such single stimuli when reaches the threshold value is able to evoke the secretory activty of aesophageal fibrils, the mechanism responsible for separation of the vacuole from cytopharynx. On the base of this hypothesis it is possible to understand the stimulative effect of basic brown G on phagocytosis in S. ambiguum

ITLE: Mycoplasma hominis parasitism of Trichomonas vaginalis

Rappelli, P ; Addis, M F ; Carta, F ; Fiori, P L
Department of Biomedical Sciences, Division of Experimental and Clinical Microbiology, University of Sassari, 07100 Sassari, Italy

The Lancet, v352, n9145, p 2023
December 19/26, 1998

DOCUMENT TYPE: Journal; Correspondence-Author's reply ISSN: 0140-6736
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 444

TEXT:

Sir-We reported the detection and isolation of M hominis in 32 of 35 T vaginalis obtained from clinical samples; we also showed that mycoplasmas are still detectable even after several months of in- vitro cultivation of the protozoa. D A Street and colleagues' *RF 1 *results on the other hand, show that a massive phagocytosis of mycoplasmas by T vaginalis takes place when these organisms are mixed in vitro, and that most mycoplasmas are killed within 3 h. The massive killing described by Street's group is not necessarily in contrast to our results, in fact, upon coincubation of a mycoplasma- free T vaginalis culture and M hominis in vitro, we showed a rapid fall in the number of bacteria. However, a few bacteria survived, and established a symbiosis that was maintained indefinitely, as indicated by the fact that mycoplasmas are detectable even after the extensive dilutions in **Diamond** 's medium during cultivation of the parasites. Nevertheless, the number of mycoplasmas per T vaginalis cell after in-vitro infection is always lower than the number of bacteria detectable in in-vivo infected **protozoa** . This finding might indicate an isolate-to-isolate different susceptibility to M hominis infection, or that a longer time of co-growth is needed for the bacteria to reach the high number needed for infection.

The fact that after isolation from the clinical sample M hominis and T vaginalis persist indefinitely in association, despite the 1:16 daily dilutions in **Diamond** 's medium, is itself evidence that the **protozoon** cannot eliminate all mycoplasmas. Moreover, since M hominis cannot multiplicate in **Diamond** 's medium alone, a more contemporary co-growth should be excluded.

The association between T vaginalis and M hominis was first recorded by Nielsen. *RF 2 * *RF 3 * He reported electronmicrographs showing mycoplasma forms, without any sign of lysis, located in large food vacuoles of the parasite, both in vaginal secretions and after 6 weeks of in-vitro cultivation. Nielsen also reported that "bacteria of the vaginal fluid, but not mycoplasms, are lysed when engulfed by T vaginalis cells". *RF 2 * in our letter we merely referred to the work of Nielsen, and did not undertake any further electronmicroscopy to show the T vaginalis-M hominis association.

We agree that further investigation is needed to define whether mycoplasmas are localised inside the protozoan cytoplasm or are membrane associated, and we are undertaking such studies. We drew attention to the T vaginalis-M hominis association, and we agree with Street and colleagues that help in transportation within the genital tract could be either provided by adherence of mycoplasmas to the external surface of the protozoon and by intracellular ingestion. Of course, the actual importance of this carrier role could be elucidated only by in-vivo studies.

Diagnosis of trichomoniasis; comparison of conventional wet-mount examination with cytologic studies, cultures, and monoclonal antibody staining of direct specimens. (Toward Optimal Laboratory Use)
Feb 26, 1988
WORD COUNT: 4075 LINE COUNT: 00345

... 600 patients evaluated in this study. In 78 cases, T vaginalis organisms were isolated using **Diamond** 's medium, while in 82 cases, **protozoa** were isolated using Feinberg-Whittington medium. Most positive cultures were recorded at 46 to 98...

...53 wet mount-positive cases and 31 (89%) of 35 wet mount-negative cases, while **Diamond** 's medium detected 48 (91%) of 53 wet mount-positive cases and 30 (86%) of 35 wet mount-negative cases.

Motile **protozoa** with typical morphologic features were identified in the wet mount from one additional woman with...

4/6,KWIC/61 (Item 1 from file: 98)

03293668 H.W. WILSON RECORD NUMBER: BGSI96043668 (USE FORMAT 7 FOR FULLTEXT)
Cell biology of the primitive eukaryote Giardia lamblia.
WORD COUNT: 11618
'96 (19960000)

(USE FORMAT 7 FOR FULLTEXT)

TEXT:
... caltractin. J. Biol. Chem. 269:15795-15802

68. Weinbach EC. 1981. Biochemistry of enteric parasitic **protozoa** . Trends Biochem. Sci. 2:254-57

69. Weinbach EC, Claggett CE, Keister DB, **Diamond** LS, Kon H. 1980. Respiratory metabolism of Giardia lamblia. J. Parasitol. 66:347-50

Molecular typing of Trichomonas vaginalis isolates by HSP70 restriction fragment length polymorphism.

Stiles JK; Shah PH; Xue L; Meade JC; Lushbaugh WB; Cleary JD; Finley RW
Department of Medicine, University of Mississippi Medical Center, Jackson 39216-4505, USA.

American journal of tropical medicine and hygiene (United States) Apr 2000, 62 (4) p441-5, ISSN 0002-9637 Journal Code: 3ZQ
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: AIM; INDEX MEDICUS

Subtyping isolates of Trichomonas vaginalis is an essential tool for understanding the epidemiology of this common sexually-transmitted disease. Restriction fragment length polymorphism (RFLP) analysis employing a probe from the heat-inducible cytoplasmic HSP70 gene family hybridized with EcoR I-digested genomic DNA was used in the molecular typing of Trichomonas isolates. Analysis of five American Type Culture Collection (ATCC) reference strains and 31 Jackson, Mississippi, isolates from six male and 21 female patients, revealed 10 distinct RFLP pattern subtypes of Trichomonas. The subtypes were temporally stable and cosmopolitan. The RFLP profiles seen in Maryland, Ohio, Massachusetts, and New York ATCC strains were identical to those of some Mississippi isolates, even though the samples were isolated 10-35 years apart. There was no correlation between metronidazole resistance and RFLP subtype with resistant isolates from eight patients distributed among six different subtypes.

Sociopathologic behavior and repeated infection with venereal disease]

Sociopatoloske pojave i ponovno obolevanje od venericnih bolesti.

Bjekic M; Vlajinac H; Marinkovic J

Institute of Epidemiology, School of Medicine, Belgrade.

Srpski arhiv za celokupno lekarstvo (YUGOSLAVIA) Jul-Aug 1999, 127 (7-8) p254-7, ISSN 0370-8179 Journal Code: UZG

Languages: SERBO-CROATIAN (CYRILLIC)

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

INTRODUCTION: The sexually transmitted diseases (STDs) comprise a large group of infections produced by different microorganisms including spirochetes, bacteria, chlamydia, mycoplasme, **protozoa** , fungi, parasites, and viruses. A considerable number of sexually transmitted diseases patients are STD repeaters. As reported by Marjanovitsh and Laloshevitsh [2], in Belgrade, among patients who during the years 1985 and 1986 visited the City Department for Skin and Veneral Diseases, because of syphilis or gonorrhea, 22.8% had these diseases two or more times during their lives (male/female ratio 10:1). In Richert et al. [6] study over 30% of all patients who in one year visited sexually transmitted diseases clinic in Dade County, Florida, returned with a new infection within 3 years of their index visit. The aim of this study was to test the hypothesis that there is a relationship between antisocial behaviour and repeated STD. MATERIAL AND METHODS: Case-control study was performed in the population of Belgrade, from June 1997 to April 1998. Participants were recruited among patients attending the City Department for Skin and Venereal Diseases of Belgrade because of sexually transmitted diseases (syphilis, gonorrhea, nongonoccocal **urethritis** and genital warts). The group comprised 101 patients who in their personal histories already had STD two or more times. The control group consisted of 210 patients treated at the same institution for micotic diseases, patients who in their personal histories have never had STD or had it only once (13% of controls). All participants were men aged 20 to 50 years and all were from Belgrade. Data on demographic characteristics, sexual history and sexual behaviour, as well as data on use of sedatives, smoking habit and sport activity, and data on antisocial behaviour (alcohol abuse, prostitution, drug abuse, prosecution for minor and criminal offences) were collected from all participants by an anonymous questionnaire. In the present paper only data on antisocial behaviour are presented. In the analysis of data chi 2 was used. RESULTS: According to the results obtained, STD repeaters in comparison to their controls used more frequently alcohol (17.8%:0.9%) and drug 18.8%:3.8%), had more frequently sex for money (17.8%:2.8%), and were more frequently prosecuted for minor offences (58.4%:24:8%) and criminal offences (24.8%:4.3%). All these differences were statistically significant ($p < 0.01$). DISCUSSION: In the present study STD repeaters consumed alcohol more frequently than their controls, especially hard liquors, and 55.5% of them had used alcohol at the time of STD infection. In the study of Myliueva et al. [4], 50% of venereal disease patients consumed alcohol now and then and 10% consumed alcohol frequently. Scheidt and Windle [5] found that 60% of alcoholics had at least one sexually transmitted disease as the result of a high number of sexual partners, low use of condoms and practicing sex for drugs or money. Alcohol has depressive effect on the central nervous system, reduces anxiety and increases libido. In this study STD repeaters in comparison with their controls were significantly more frequently drug users (the majority of them inhaled drugs). In several studies conducted in the USA [7, 8] the increase of gonorrhea and syphilis was related to drug use. Upchurch et al. [9] reported that individuals with repeated episodes of gonorrhea were frequently intravenous drug abusers. Drugs are most frequently used by young people, at ages of the highest sexual activity. While most of the subjects developed sexual disinterest and dysfunction with prolonged crack cocaine use, some of them become more sexually promiscuous and consequently contracted sexually transmitted diseases more often. Inciardi /10/ found that 1/3 of men who had exchanged sex for crack (or for money needed to by crack) had 100 or more sex partners during a 30-day period prior to study recruitment. Cleghorn et al. (ABSTRACT TRUNCAT

Tags: Human; Male

Descriptors: *Crime; *Prostitution; *Sexually Transmitted Diseases

--transmission--TM; *Substance-Related Disorders; Adult; Middle Age;

Trichomonas vaginalis as a cause of urethritis in Malawian men.

Hobbs MM; Kazembe P; Reed AW; Miller WC; Nkata E; Zimba D; Daly CC; Chakraborty H; Cohen MS; Hoffman I

Department of Medicine, The University of North Carolina at Chapel Hill, 27599, USA.

Sexually transmitted diseases (UNITED STATES) Aug 1999, 26 (7) p381-7, ISSN 0148-5717 Journal Code: U9G

Contract/Grant No.: R01DK49881, DK, NIDDK; RR0046, RR, NCRR; U01 AI31496, AI, NIAID

Comment in Sex Transm Dis. 1999 Aug;26(7) 388-9

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

BACKGROUND AND OBJECTIVES: Trichomonas vaginalis is one of the most common sexually transmitted infections. In Malawi, rates of trichomoniasis in women are high. The prevalence of T. vaginalis infection in men is expected to be high but has not previously been documented. GOALS: We sought to determine the prevalence of trichomoniasis in Malawian men with and without **urethritis** , to evaluate a polymerase chain reaction detection assay for T. vaginalis in urethral swabs and to examine the effect of T. vaginalis infection on excretion of human immunodeficiency virus (HIV) in semen. STUDY DESIGN: Men presenting at the Sexually Transmitted Diseases (STD) and Dermatology Clinics in Malawi were enrolled in a cross-sectional study. We compared a polymerase chain reaction-based test for T. vaginalis detection with wet-mount microscopy and culture of urethral swabs. HIV serology was determined by enzyme-linked immunosorbent assay (ELISA), and HIV-1 RNA concentrations in semen were measured by quantitative nucleic acid sequence-based analysis. RESULTS: T. vaginalis was detected in 51 of 293 men. The estimated prevalence among symptomatic men was 20.8% and among asymptomatic men, 12.2%. Polymerase chain reaction performed with a sensitivity of 0.82 (95% CI: 0.66-0.92) and specificity of 0.95 (95% CI: 0.91-0.97) compared to wet-mount microscopy and culture. There was no difference in the rate of HIV seropositivity in men with and without T. vaginalis infection. However, in men with symptomatic **urethritis** , the median HIV RNA concentration in seminal plasma from men with T. vaginalis was significantly higher that in seminal plasma from HIV-positive men without trichomonas.

Tags: Animal; Human; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

Descriptors: Polymerase Chain Reaction--methods--MT; *Trichomonas Infections--epidemiology--EP; *Trichomonas Infections--parasi

[Chlamydial infection in patients with inflammatory diseases of the genitalia]

Khlamidiinaia infektsiia u bol'nykh s vospalitel'nymi zabolevaniiami polovykh organov.

Gorpinchenko II; Dobrovol'skaia LI

Likars'ka sprava (UKRAINE) Jul-Aug 1997, (4) p99-104, ISSN 1019-5297 Journal Code: CIU

Languages: RUSSIAN

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Examination of patients with inflammatory diseases of the genital organs showed high percentage of Chlamydia infection in male localized diseases accounting for 42.8%, 48.0%, and 57.1% in **urethritis** , urethroprostatitis, and infertility respectively. In a major proportion of cases (73.0%) Chlamydia infection occurred in association with different kinds of microorganisms (bacteria, **protozoans** , fungi of Candida genus, etc.) chlamydiae are considered to be the leading etiologic factor of the female genitalia inflammatory diseases accounting for 32.4 to 51.0% depending on the method of examination employed. The most effective treatment option was found to be that of combination of realdiron with sumamed.

Diagnosis of Trichomonas vaginalis in male urethritis.

Pillay DG; Hoosen AA; Vezi B; Moodley C

Department of Medical Microbiology, Faculty of Medicine, University of Natal, Durban, South Africa.

Tropical and geographical medicine (NETHERLANDS) 1994, 46 (1) p44-5, ISSN 0041-3232 Journal Code: WGJ

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Trichomonas vaginalis was diagnosed in 42 (19%) of 227 adult males with urethral discharge. In 27 men (15%) T. vaginalis was isolated together with Neisseria gonorrhoeae. Non-gonococcal **urethritis** was diagnosed in 15 patients and T. vaginalis was isolated from 47% of such patients. Stained smear preparations, i.e. RapiDiff and acridine orange of modified **Diamond**'s media, were superior to wet smear microscopy for the identification of T. vaginalis. RapiDiff stain was the most sensitive and identified 41 of 42 (98%) positive cultures. It is recommended that all turbid culture media should be stained for the optimal diagnosis of trichomoniasis.

Tags: Animal; Human; Male

Study on ultrastructural cytochemistry and pathogenic mechanism of Trichomonas vaginalis.

Chen W; Cai H; Chen J; Zhong X; Chen L
Laboratory of Electron Microscopy, Fujian Medical College, Fuzhou.

Chinese medical journal (CHINA) Sep 1996, 109 (9) p695-9, ISSN 0366-6999 Journal Code: D3B
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: INDEX MEDICUS

OBJECTIVE: To study the relation among enzymic ultrastructural localizations, cell organelles and functions of Trichomonas vaginalis (T. vaginalis) as well as its pathogenic mechanism. MATERIAL AND METHODS: The specimens were Trichomonas vaginalis cultured purely for several generations. After prefixation, several electron microscopic cytochemical reactions for marker enzymes of lysosome, Golgi body, mitochondrion and microbody as well as Ur-Pb-Cu impregnation were undertaken. Then the specimens were post-fixed and embedded, and the unstained ultrathin sections were observed under a transmission electron microscope. RESULTS: The activities of acid phosphatase and cytidine monophosphatase appeared in the primary and secondary lysosomes of the parasite, and the reaction product of peroxidase was found in the secondary lysosomes. It was found that lysosomes could release hydrolytic enzymes out of the cell. The reaction products of thiamine pyrophosphatase and nicotinamide adenine dinucleotide phosphatase were located within the mature-surface and intermediate saccules of Golgi body respectively. The reactions for succinate dehydrogenase, cytochrome oxidase and catalase were negative. The hydrogenosomes, endoplasmic reticulum and Golgi bodies of the parasite were densely stained by Ur-Pb-Cu impregnation method. CONCLUSIONS: T.vaginalis has lysosomal system which can release hydrolases out of the parasite, causing damage to the vaginal and urethral epithelial cells. This may be an important pathogenic mechanism of vaginitis and **urethritis** caused by T.vaginalis. This **protozoon** has well-developed Golgi bodies and rich endoplasmic reticulum. It lacks mitochondrion and microbody, but has abundant hydrogenosomes which are energy producing organelles of anaerobic metabolism and resemble microbody in morphology and mitochondrion in some functions.

Prokaryotic DNA sequences in patients with chronic idiopathic prostatitis.

Krieger JN; Riley DE; Roberts MC; Berger RE
Department of Urology, School of Medicine, University of Washington, Seattle, USA.

Journal of clinical microbiology (UNITED STATES) Dec 1996, 34 (12) p3120-8, ISSN 0095-1137 Journal Code: HSH
Contract/Grant No.: AI24136, AI, NIAID; RO1 DK38955, DK, NIDDK
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: INDEX MEDICUS

Half of all men experience symptoms of prostatitis at some time in their lives, but the etiology is unknown for more than 90% of patients. Optimal clinical and culture methods were used to select 135 men with chronic prostatitis refractory to multiple previous courses of antimicrobial therapy. The subjects had no evidence of structural or functional lower genitourinary tract abnormalities of bacteriuria or bacterial prostatitis by traditional clinical tests, or of **urethritis** or urethral pathogens by culture. Specific PCR assays detected Mycoplasma genitalium, Chlamydia trachomatis, or Trichomonas vaginalis in 10 patients (8%). Broad-spectrum PCR tests detected tetracycline resistance-encoding genes, tetM-tetO-tetS, in 25% of patients and 16S rRNA in 77% of subjects. The tetM-tetO-tetS-positive cases constituted a subset of the 16S rRNA-positive cases. Patients with 16S rRNA were more likely to have > or = 1,000 leukocytes per mm3 in their expressed prostatic secretion than men whose prostate biopsy specimens were negative for 16S rRNA ($P < 0.001$). Based on direct sequencing and repetitive cloning, multiple sources of 16S rRNA were observed in individual patients. Sequences of 29 cloned PCR products revealed 16S rRNAs distinct from those of common skin and gut flora. These findings suggest that the prostate can harbor microorganisms that are not detectable by traditional approaches. These organisms may be associated with inflammation in the expressed prostatic secretions. Molecular methods hold great promise for identifying culture-resistant microorganisms in patients with chronic prostatitis.

Tags: Animal; Human; Male; Support, Non-U.S. Gov't; Support

Development of a polymerase chain reaction-based diagnosis of Trichomonas vaginalis.

Riley DE; Roberts MC; Takayama T; Krieger JN
Department of Urology, School of Medicine, University of Washington, Seattle 98195.

Journal of clinical microbiology (UNITED STATES) Feb 1992, 30 (2) p465-72, ISSN 0095-1137 Journal Code: HSH
Contract/Grant No.: T01 DK38955, DK, NIDDK
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: INDEX MEDICUS

We developed a polymerase chain reaction (PCR)-based test for detecting the **protozoan** parasite Trichomonas vaginalis. Genomic libraries were constructed from two independent clinical isolates of T. vaginalis. From these libraries, 12 genomic clones were purified, sequenced, and then screened for uniqueness by computer-assisted sequence comparisons. PCR reactions were performed to evaluate eight PCR-primer pairs, including a primer pair that targeted the T. vaginalis ferredoxin gene. All eight primer pairs yielded PCR products of the expected sizes. However, six of the primer pairs amplified their respective target sequences in limited numbers of clinical T. vaginalis isolates, suggesting the presence of significant genomic variability among isolates. An exception was a primer pair, termed TVA5-TVA6, that amplified a 102-bp genomic sequence, termed A6p, in all of 24 clinical isolates. The A6p sequence was not detected by PCR in human DNA or in a wide variety of flagellates, ciliates, or bacteria tested. The A6p sequence appears highly selective for a broad range of T. vaginalis isolates and holds promise for PCR-based diagnosis of the parasite.

A microbiological study of failed penicillin therapy for gonococcal urethritis in Durban.

Hoosen AA; Coetzee KD; van den Ende J
Department of Medical Microbiology, University of Natal, Durban.

South African medical journal (SOUTH AFRICA) Aug 18 1990, 78 (4) p189-91, ISSN 0038-2469 Journal Code: U4R
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: INDEX MEDICUS

Seventy-five men presenting with persistent urethral discharge after penicillin therapy were investigated for sexually transmitted pathogens during July - September 1987. The major aetiological agent isolated was Neisseria gonorrhoeae (58 patients (77.3%]. Penicillinase-producing N. gonorrhoeae (PPNG) accounted for 58.6% of 58 isolates. Chlamydia trachomatis was detected in 10.7% of patients and Trichomonas vaginalis in 14.7% of patients. When there is a high prevalence of PPNG, the use of penicillin as a first-line agent for therapy should be discontinued in favour of an agent active against PPNG and non-PPNG strains. Furthermore, in view of the relatively high prevalence of T. vaginalis, patients returning with persistent urethral discharge should be investigated and treated for infection with this **protozoan** .

Tags: Animal; Human; Male
Descriptors: Gonorrhea--drug therapy--DT; *Neisseria gono

Analysis of cell movement and signalling during ring formation in an activated G alpha1 mutant of Dictyostelium discoideum that is defective in prestalk zone formation.

Rietdorf J; Siegert F; Dharmawardhane S; Firtel RA; Weijer CJ

Zoologisches Institut, Universitat Munchen, Munich, Germany.

Developmental biology (UNITED STATES) Jan 1 1997, 181 (1) p79-90, ISSN 0012-1606 Journal Code: E7T

Contract/Grant No.: GM24279, GM, NIGMS; GM37830, GM, NIGMS

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Mound formation in the cellular slime mould Dictyostelium results from the chemotactic aggregation of competent cells. Periodic cAMP signals propagate as multiarmed spiral waves and coordinate the movement of the cells. In the late aggregate stage the cells differentiate into prespore and several prestalk cell types. Prestalk cells sort out chemotactically to form the tip, which then controls all further development. The tip organises cell movement via a scroll wave that converts to planar waves in the prespore zone leading to **rotational cell** movement in the tip and periodic forward movement in the prespore zone. Expression of an activated G alpha1 protein under its own promoter leads to a severely altered morphogenesis from the mound stage onwards. Instead of forming a tipped mound, the cells form a ring-shaped structure without tip. Wave propagation pattern and dynamics during aggregation and mound formation in the mutant are indistinguishable from the parental strain AX3. However, at the time of tip formation the spiral waves that organise the late aggregate do not evolve in a scroll-organising centre in the tip but transform into a circularly closed (twisted) scroll ring wave. This leads to the formation of a doughnut-shaped aggregate. During further development, the doughnut increases in diameter and the twisted scroll wave converts into a train of planar waves, resulting in periodic **rotational cell** movement. Although biochemical consequences resulting from this mutation are still unclear, it must affect prestalk cell differentiation. The mutant produces the normal proportion of prespore cells but is unable to form functional prestalk cells, i.e., prestalk cells with an ability to sort out from the prespore cells and form a prestalk zone. Failure of sorting leads to an altered signal geometry, ring-shaped scroll waves, that then directs ring formation. This mutant demonstrates the importance of prestalk cell sorting for the stabilisation of the scroll wave that organises the tip.

Tags: Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Descriptors: Chemotaxis--genetics--GE; *Dictyostelium--genetics--GE; *Fungal Proteins--physiology--PH; *GTP-Binding Proteins--physiology--PH; * **Protozoan** Proteins--physiology--PH; *Signal Transduction; Cell Movement; Dictyostelium--physiology--PH; Fungal Proteins--genetics--GE; GTP-Binding Proteins--genetics--GE; Guanosine Triphosphate--metabolism--ME; Morphogenes is; **Protozoan** Proteins--genetics--GE

CAS Registry No.: 0 (Fungal Proteins); 0 (Protozoan Proteins); 86-01-1 (Guanosine Triphosphate)

Enzyme No.: EC 3.6.1.- (GTP-Binding Proteins)

Record Date Created: 19970227

8/9/2

DIALOG(R)File 155:MEDLINE(R)

09378913 97329534 PMID: 9186008

Flagellar photoresponses of ptx1, a nonphototactic mutant of Chlamydomonas.

Ruffer U; Nultsch W

Philipps-Universitat Marburg, Germany.

Cell motility and the cytoskeleton (UNITED STATES) 1997, 37 (2) p111-9, ISSN 0886-1544 Journal Code: CRD

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Phototaxis in wild-type Chlamydomonas cells is probably the result of four single photoresponses in the flagella, inverse in the cis (near the eyespot) and in the trans flagellum and also inverse by step-up (increase of) and step-down (decrease of) light stimulation as experienced by the eyespot during **rotation** of the **cell** [Ruffer and Nultsch, 1991: Cell Motil. Cytoskeleton 18:269-278]. Two inverse sets of the four responses are supposed to be the cause for positive and negative phototaxis. The relevant flagellar responses consist of shifts of the front amplitude of the breaststroke beats. As single flagellar responses cannot be called "phototactic" they are termed "breaststroke flagellar photoresponses." The mutant strain ptx1 is defective in phototaxis but displays photoshocks [Horst and Witman, 1993: J. Cell Biol. 120:733-741]. Analysis of flagellar beat patterns in high-speed records of ptx1 cells held on micropipettes shows that breaststroke flagellar photoresponses exist in this mutant in spite of the loss of phototaxis. It is the cis/trans differentiation that is lost in ptx1: both flagella always respond in the same way and not inversely as in wild-type cells. Equal shifts of beat amplitude cannot cause a turn of the cell, which explains why phototaxis is not seen in ptx1 and supports the model suggested for positive and negative phototactic steering. In wild-type cells front amplitude changes are connected with beat period changes, which also occur in ptx1 cells and suggest that both flagella respond like wild-type trans flagella. Divergencies in the shock response of ptx1 cells, beat period reduction, and coordination changes may support the notion that cis flagellar specialization is lost and that ptx1 possesses, so to speak, two trans and no cis flagellum. Therefore, the mutant strain ptx1 might be useful for studying molecular and functional peculiarities of the two flagella.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: *Chlamydomonas reinhardtii--physiology--PH; *Flagella --physiology--PH; Chlamydomonas reinhardtii--genetics--GE; Chlamydomonas reinhardtii--radiation effects--RE; Flagella--genetics--GE; Genes, **Protozoan** ; Light; Mutation; Periodicity

Record Date Created: 19970813

8/9/3

09034342 96413072 PMID: 8816287

Free movement of Tritrichomonas foetus in a liquid medium: a video-microscopy study.

Monteiro-Leal LH; Farina M; de Souza W

Laboratorio de Biologia Celular e Tecidual, Univesidade Estadual do Norte Fluminense, Rio de Janeiro, Brazil.

Cell motility and the cytoskeleton (UNITED STATES) 1996, 34 (3) p206-14, ISSN 0886-1544 Journal Code: CRD

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

The present paper describes in detail the complex movement of the **protozoon** Tritrichomonas foetus. By the use of analogue and digital video techniques, we were able to analyze frame by frame the beatings of the anterior flagella and discuss their role in the movement of the cell. We also measured the productive displacement of the cell during one flagellar beating cycle. The obtained data were digitally improved and compared to analogue quantifications. It is shown that during 1 s of recorded movement, T. foetus performs 4 complete anterior flagella beating cycles (with active-like and recovery-like beatings). In each cycle the cell swims +/- 6.5 microns forwards, after the recovery of +/- 1.5 microns of receded movement. These observations led us to conclude that the estimated average speed of T. foetus is 25 microns/s, and that all flagella participate in the cell movement. The recurrent flagellum continuously contribute to the forward movement of the **protozoon** . The **cell** also performs **rotational** movements. The obtained results led us to suggest a model for the movement

of T.foetus.
Tags: Animal; Support, Non-U.S. Gov't
Descriptors: *Image Processing, Computer-Assisted; *Microscopy, Video; *Tritrichomonas foetus--physiology--PH; Culture Media
CAS Registry No.: 0 (Culture Media)
Record Date Created: 19961204

Urethritis **associated with disseminated microsporidiosis: Clinical response to albendazole**
Corcoran G.D.; Isaacson J.R.; Daniels C.; Chiodini P.L.
Department of Clinical Microbiology, Western Infirmary,Glasgow G11 6NT United Kingdom
Clinical Infectious Diseases (CLIN. INFECT. DIS.) (United States) 1996, 22/3 (592-593)
CODEN: CIDIE ISSN: 1058-4838
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH
DRUG DESCRIPTORS:
*albendazole--drug dose--do; *albendazole--drug therapy--dt
MEDICAL DESCRIPTORS:
*acquired immune deficiency syndrome; ***protozoal*** infection--drug therapy --dt; ***protozoal*** infection--diagnosis--di; ***protozoal*** infection --complication--co; *urethritis--complication--co; *urethritis--drug therapy--dt; *urethritis--diagnosis--di
adult; article; case report; chronic diarrhea--complication--co; disease association; human; infection risk; male; microspora; priority journal
CAS REGISTRY NO.: 54965-21-8 (albendazole)
SECTION HEADINGS:
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
006 Internal Medicine
028 Urology and Nephrology
037 Drug Literature Index

4/9/4 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

04412108 EMBASE No: 1990300217
A microbiological study of failed penicillin therapy for gonococcal urethritis **in Durban**
Hoosen A.A.; Coetzee K.D.; Van Den Ende J.
Department of Medical Microbiology, University of Natal, PO Box 17039, Congella, 4013 South Africa
South African Medical Journal (S. AFR. MED. J.) (South Africa) 1990, 78/4 (189-191)
CODEN: SAMJA ISSN: 0038-2469
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Seventy-five men presenting with persistent urethral discharge after penicillin therapy were investigated for sexually transmitted pathogens during July - September 1987. The major aetiological agent isolated was Neisseria gonorrhoeae (58 patients (77,3%)). Penicillinase-producing N. gonorrhoeae (PPNG) accounted for 58,6% of 58 isolates. Chlamydia trachomatis was detected in 10,7% of patients and Trichomonas vaginalis in 14,7% of patients. When there is a high prevalence of PPNG, the use of penicillin as a first-line agent for therapy should be discontinued in favour of an agent active against PPNG and non-PPNG strains. Furthermore, in view of the relatively high prevalence of T. vaginalis, patients returning with persistent urethral discharge should be investigated and treated for infection with this **protozoan** .

DRUG DESCRIPTORS:
*procaine penicillin--drug therapy--dt
probenecid; spectinomycin; tetracycline
MEDICAL DESCRIPTORS:
*chlamydia trachomatis; *gonorrhea--drug therapy--dt; *neisseria gonorrhoeae; *trichomonas vaginalis; *urethritis--drug therapy--dt
adult; **protozoon** ; major clinical study; human; male; intramuscular drug administration; oral drug administration; article; priority journal
CAS REGISTRY NO.: 54-35-3, 6130-64-9 (procaine penicillin); 57-66-9 (probenecid); 1695-77-8, 21736-83-4, 23312-56-3 (spectinomycin); 23843-90-5, 60-54-8, 64-75-5 (tetracycline)

07362595 BIOSIS NO.: 000090141512
SOME DATA ON MORPHOHISTOCHEMICAL AND MICROBIOLOGICAL STUDIES OF URETHRITIS

AUTHOR: VADACHKORIYA G A; SALAKAYA R G; DIASAMIDZE I A; BABUKHADIYA V V; AMIRYAN N B; TSINTSADZE O V; KANDELAKI G V
AUTHOR ADDRESS: RES. INST. UROL. NEPHROL., MINIST. HEALTH GEORGIAN SSR, TBILISI, USSR.
JOURNAL: IZV AKAD NAUK GRUZ SSR SER BIOL 16 (2). 1990. 97-100. 1990
FULL JOURNAL NAME: Izvestiya Akademii Nauk Gruzinskoi Ssr Seriya Biologicheskaya
CODEN: IGSBD
RECORD TYPE: Abstract
LANGUAGE: RUSSIAN

ABSTRACT: Some data on morphohistochemical study of autopsy material from the patients of different ages, suffering from urethritis presented. In the inflammed section of urethra definite structural and histochemical changes were found. Enterococcus as well as Chlamydia and trichomonades were shown to be the main agents of urethritis.

DESCRIPTORS: ENTEROCOCCUS CHLAMYDIA TRICHOMONAS HUMAN
CONCEPT CODES:
11108 Anatomy and Histology, General and Comparative-Microscopic and Ultramicroscopic Anatomy
12508 Pathology, General and Miscellaneous-Inflammation and Inflammatory Disease
15506 Urinary System and External Secretions-Pathology
25508 Developmental Biology-Embryology-Morphogenesis, General
36002 Medical and Clinical Microbiology-Bacteriology
60504 Parasitology-Medical
01056 Microscopy Techniques-Histology and Histochemistry
12504 Pathology, General and Miscellaneous-Diagnostic
31000 Physiology and Biochemistry of Bacteria
BIOSYSTEMATIC CODES:
05514 Streptococcaceae (1979-)
05914 Chlamydiaceae (1979-)
35200 Flagellata
86215 Hominidae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Microorganisms
Bacteria
Animals
Invertebrates
Protozoans
Chordates
Vertebrates
Mammals
Primates
Humans

4/9/63 (Item 25 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

05719458 BIOSIS NO.: 000084067864
DETECTION OF CANDIDIASIS IN NON-GONOCOCCAL URETHRITIS **RESISTANT TO THERAPY**

AUTHOR: BEDUK Y; MANALP M
AUTHOR ADDRESS: SSK ULUS HASTANESI, UROL. UZMANI.
JOURNAL: MIKROBIYOL BUL 20 (3). 1986 (RECD. 1987). 190-195. 1986
FULL JOURNAL NAME: Mikrobiyoloji Bulteni
CODEN: MIBUB
RECORD TYPE: Abstract
LANGUAGE: TURKISH

ABSTRACT: In this study, Candida sp. and all other microorganisms were attempted to be isolated in 30 patients with non-gonococcal urethritis who hadn't responded to classical antimicrobial therapy. Candida sp. in 6, various bacterias in 11, Salmonella in one and Trichomonas vaginalis in one of them were detected. No microorganisms were isolated in 13, 4 of these Candida species which were detected by sabouraud culture, were also evaluated by direct microspoic examination.

DESCRIPTORS: SALMONELLA CANDIDA-SP TRICHOMONAS-VAGINALIS HUMAN
CONCEPT CODES:
15506 Urinary System and External Secretions-Pathology
16506 Reproductive System-Pathology
22005 Pharmacology-Clinical Pharmacology (1972-)
36001 Medical and Clinical Microbiology-General; Methods and Techniques
36002 Medical and Clinical Microbiology-Bacteriology
36008 Medical and Clinical Microbiology-Mycology
38502 Chemotherapy-General; Methods; Metabolism
60504 Parasitology-Medical
10060 Biochemical Studies-General
64002 Invertebrata, Comparative and Experimental Morphology, Physiology and Pathology-Protozoa
BIOSYSTEMATIC CODES:
04810 Enterobacteriaceae (1979-)
15500 Fungi Imperfecti or Deuteromycetes
35200 Flagellata
86215 Hominidae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Microorganisms
Bacteria
Plants
Nonvascular Plants
Fungi
Animals
Invertebrates
Protozoans
Chordates
Vertebrates
Mammals
Primates
Humans

4/9/118 (Item 4 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03343474 CAB Accession Number: 972002491
Microsporidia: a new sexually transmissible cause of urethritis.
Birthistle, K.; Moore, P.; Hay, P.
Department of Medical Microbiology, Tooting Public Health Laboratory, London, UK.
Genitourinary Medicine vol. 72 (6): p.445
Publication Year: 1996
ISSN: 0266-4348 --
Language: English
Document Type: Correspondence
A case is reported of microsporidiosis in a 35-year-old homosexual man with AIDS, who presented with sinusitis, urethritis and diarrhoea. The patient had multiple episodes of gross urethritis with a profuse brown urethral discharge, which was only partially responsive to antibiotics. Four months later he developed diarrhoea and microsporidium was detected in his stool. The urethritis finally resolved after a four-week course of albendazole 400 mg bd. 6 ref.

DESCRIPTORS: acquired immune deficiency syndrome; HIV infections; human diseases; case reports; urethritis; diagnosis; sexual transmission;

Electron microscopy of Giardia lamblia cysts.

Luchtel DL; Lawrence WP; DeWalle FB

Applied and environmental microbiology (UNITED STATES) Oct 1980, 40 (4) p821-32, ISSN 0099-2240 Journal Code: 6K6

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

The **flagellated protozoan** Giardia lamblia is a recognized public health problem. Intestinal infection can result in acute or chronic diarrhea with associated symptoms in humans. As part of a study to evaluate removal of G. lamblia cysts from drinking water by the processes of coagulation and dual-media filtration, we developed a methodology by using 5.0-microns-porosity membrane filters to evaluate the filtration efficiency. We found that recovery rates of G. lamblia cysts by membrane filtration varied depending upon the type and **diameter** of the membrane filter. Examination of membrane-filtered samples by scanning electron microscopy revealed flexible and flattened G. lamblia cysts on the filter surface. This feature may be responsible for the low recovery rates with certain filters and, moreover, may have implications in water treatment technology. Formation of the cyst wall is discussed. Electron micrographs of cysts apparently undergoing binary fission and cysts exhibiting a possible bacterial association are shown.

Tags: Animal; Support, U.S. Gov't, Non-P.H.S.

Descriptors: *Giardia--ultrastructure--UL; Desiccation; Filtration --instrumentation--IS; Giardia--isolation and purification--IP; Microscopy, Electron; Microscopy, Electron, Scanning

Record Date Created: 19801218

Experimental infections in chickens with Chilomastix gallinarum, Tetratrichomonas gallinarum, and Tritrichomonas eberthi.

Friedhoff KT; Kuhnigk C; Muller I

Institut fur Parasitologie, Tierarztlichen Hochschule Hannover, Federal Republic of Germany.

Parasitology research (GERMANY) 1991, 77 (4) p329-34, ISSN 0932-0113 Journal Code: PRE

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Flagellates from the caeca of a diseased hen and a diseased goose were transmitted to 35 specific pathogen-free (SPF) chickens. The **flagellates** of chicken origin were identified as Chilomastix gallinarum, Tritrichomonas eberthi, and Tetratrichomonas gallinarum. T. eberthi was not detected in the material of goose origin. Morphologic studies did not reveal any differences between Chilomastix and Tetratrichomonas specimens from chicken or goose origin. The species from the goose were identified as C. gallinarum and T. gallinarum (Syn. T. anseris Hegner, 1929). Both trichomonad species produced pseudocysts that developed in the faeces of chickens within 3 h after excretion. Only 17% of the trichomonads excreted had reached the pseudocyst stage. All three **flagellate** species are infective to chickens when inoculated per rectum or per os or when consumed with chlorinated tap water. The prepatency period was always less than 24 h. SPF chickens between 2 and 30 days of age were equally susceptible. The infections persisted at a high level of intensity throughout the observation periods, i.e. up to 7 months. Of 35 inoculated SPF chickens, 2 developed disease (emaciation, ruffled feathers, diarrhoea, dilatation of the caeca). The three **flagellate** species were cultivated in **Diamond** 's medium for 110 days. Cryopreserved and cultivated **flagellates** retained their infectivity to chickens.

Trichomonas vaginalis: A comparative analysis of diagnostical methods.

AUTHOR: Alvarenga Vera Lucy De Santi(a); Santiago Maria Cristina Terra Peres; Cicarelli Regina Maria Barretto
AUTHOR ADDRESS: (a)Dep. Anal. Clin., Fac. Ciencias Farm., Univ. Estadual Paulista "Julio de Mesquita Filho", 14801-**Brazil

JOURNAL: Revista de Ciencias Farmaceuticas 19 (1):p67-76 1998
ISSN: 0101-3793
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English; Portuguese

ABSTRACT: Trichomoniasis is the most prevalent non viral sexually transmitted disease caused by **protozoa** , Trichomonas vaginalis, and the usual methods for diagnosis are not very sensitive to detect the parasite. In this paper, the efficiency of some methods was analysed such as wet mount, culture in **Diamond** medium and Indirect immunofluorescence reaction, using biotinylated or non-biotinylated anti-human IgG, IgM and IgA conjugates; the cultures showed a little bit better results than wet mount. When using biotinylated conjugates, IIF titers were lower than those with non biotinylated ones, even though no reaction has been detected with antihuman IgA conjugate. ELISA was also used for antibody detection in patient sera who showed positivity at least for one of the tests. These analyses were done using the same biotinylated conjugates and diluted sera at 1/200, 1/400 and 1/800, showing that ELISA can be used instead IIF with advantages; in that test, IgA antibodies could also be detected when biotinylated conjugate was used; the ELISA test could be used concomitant with culture and wet mount to help trichomoniasis diagnosis.

TESTING THE EFFECTS OF HYDRAZONES AND OSAZONES OF SUGARS ON TRICHOMONAS-VAGINALIS

AUTHOR: DEMES P; LINEK K; NEMOGOVA E; CATAR G; KLOBUSICKY M; VALENT M
AUTHOR ADDRESS: PARAZITOLOGICKY USTAV LFUK, SASINKOVA 4A, 811 08 BRATISLAVA.
JOURNAL: BRATISL LEK LISTY 77 (3). 1982. 303-310. 1982
FULL JOURNAL NAME: Bratislavske Lekarske Listy
CODEN: BLLIA
RECORD TYPE: Abstract
LANGUAGE: SLOVAK

ABSTRACT: The effect of 27 hydrazones and osazones of sugars on T. vaginalis, the parasitic **protozoan** of the human urogenital tract was studied. The effect of the derivates was expressed by determining the minimal inhibitory concentration (MIC) and the minimal lethal concentration (MLC) after 48 h cultivation in **Diamond** 's medium TYM. Of the substances tested, the derivates with the lowest number of C in the sugar molecule were most effective. These were bicarbon and tricarbon (2,4-dinitrophenyl) hydrazones of glycolic aldehyde, glyceric aldehyde and dihydroxyacetone. The sugar component of hydrazones plays a decisive role in the inhibitory effect on trichomonads. The inhibitory effects of the substances investigated were compared with the effect of metronidazole and ornidazole, which are successfully being used in the treatment of subjects affected with trichomoniasis.

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Shed

SOME DATA ON MORPHOHISTOCHEMICAL AND MICROBIOLOGICAL STUDIES OF URETHRITIS

AUTHOR: VADACHKORIYA G A; SALAKAYA R G; DIASAMIDZE I A; BABUKHADIYA V V; AMIRYAN N B; TSINTSADZE O V; KANDELAKI G V
AUTHOR ADDRESS: RES. INST. UROL. NEPHROL., MINIST. HEALTH GEORGIAN SSR, TBILISI, USSR.
JOURNAL: IZV AKAD NAUK GRUZ SSR SER BIOL 16 (2). 1990. 97-100. 1990
FULL JOURNAL NAME: Izvestiya Akademii Nauk Gruzinskoi Ssr Seriya Biologicheskaya
CODEN: IGSBD
RECORD TYPE: Abstract
LANGUAGE: RUSSIAN

ABSTRACT: Some data on morphohistochemical study of autopsy material from the patients of different ages, suffering from urethritis presented. In the inflammed section of urethra definite structural and histochemical changes were found. Enterococcus as well as Chlamydia and trichomonades were shown to be the main agents of urethritis.

Microsporidia: a new sexually transmissible cause of urethritis.

Birthistle, K.; Moore, P.; Hay, P.
Department of Medical Microbiology, Tooting Public Health Laboratory, London, UK.

Genitourinary Medicine vol. 72 (6): p.445
Publication Year: 1996
ISSN: 0266-4348 --
Language: English
Document Type: Correspondence

A case is reported of microsporidiosis in a 35-year-old homosexual man with AIDS, who presented with sinusitis, urethritis and diarrhoea. The patient had multiple episodes of gross urethritis with a profuse brown urethral discharge, which was only partially responsive to antibiotics. Four months later he developed diarrhoea and microsporidium was detected in his stool. The urethritis finally resolved after a four-week course of albendazole 400 mg bd. 6 ref.

Urethritis **associated with disseminated microsporidiosis: clinical response to albendazole**.

Corcoran, G. D.; Isaacson, J. R.; Daniels, C.; Chiodini, P. L.
Department of Clinical Parasitology, Hospital for Tropical Diseases, London, UK.

Clinical Infectious Diseases vol. 22 (3): p.592-593
Publication Year: 1996
ISSN: 1058-4838 --
Language: English
Document Type: Correspondence

The case is reported of a 36-year-old man with AIDS who presented with diarrhoea. Encephalitozoon-like spores were detected in his faeces. The diarrhoea resolved spontaneously. Subsequently he complained of urethral discharge, frequency and dysuria. Microsporidian spores were seen in a smear of urethral pus, and subsequently in smears of nasal discharge, sputum, centrifuged urinary deposit and non-diarrhoeal faeces. He was treated with albendazole (400 mg twice daily for 4 weeks). His symptoms abated rapidly and 10 days after cessation of therapy, no microsporidian spores could be detected. It is suggested that the causative agent was Septata intestinalis. 8 ref.

Free movement of Tritrichomonas **foetus in a liquid medium: a video-microscopy study.**
1996

Free movement of Tritrichomonas **foetus in a liquid medium: a video-microscopy study.**

The present paper describes in detail the complex movement of the protozoon **Tritrichomonas** foetus. By the use of analogue and digital video techniques, we were able to analyze...

... cell movement. The recurrent flagellum continuously contribute to the forward movement of the protozoon. The **cell** also performs **rotational** movements. The obtained results led us to suggest a model for the movement of T...

Descriptors: Image Processing, Computer-Assisted; *Microscopy, Video; * **Tritrichomonas** foetus--physiology--PH

Primary isolation of curved rods from women with vaginal discharge.

Hjelm E; Forsum U; Hallen A; Pahlson C; Wallin J

Scandinavian journal of urology and nephrology (SWEDEN) 1984, 86 p113-6, ISSN 0300-8886 Journal Code: UC6

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

The occurrence of **motile** anaerobic curved rods in vaginal discharge was studied in 94 samples from women attending an **STD** clinic. Almost all wet smear preparations of discharge contained **motile** rods. Anaerobic curved rods were isolated from 46% of the samples. Of 28 specimens studied by culture and immunofluorescence, 21 were confirmed to harbour **motile** anaerobic curved rods. Culture was performed with a dilution and sampling technique that is too time-consuming for diagnostic routines, but it enhanced the precision of information on **motile** anaerobic curved rods in vaginal **secretion** . More selective and rapid methods for identification of these bacteria are desirable.

Tags: Female; Human

Biological and biochemical modulation of Trichomonas **vaginalis KT9 isolate after shifting of culture medium from TPS-1 into TYM.**

Ryu J S; Choi R; Park S Y; Park H; Min D Y

Department of Parasitology, Hanyang University College of Medicine, Seoul, Korea. jsryu@email.hanyang.ac.kr

Korean journal of parasitology (KOREA) Dec 1998, 36 (4) p255-60, ISSN 0023-4001 Journal Code: 9435800

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

To evaluate the biological and biochemical characteristics of Trichomonas vaginalis KT9 isolate, the growth and **size** of trichomonads, pathogenicity in mouse, protein profiles and proteinase activity were examined after shifting the medium from TPS-1 into TYM. Generation time of trichomonads in TYM medium was 4.5 hr in comparison to TPS-1 with 7.1 hr. **Size** of trichomonads cultured in TPS-1 medium (8.5 +/- 0.9 x 6.0 +/- 0.9 **microns**) was significantly smaller than those in TYM medium (10.9 +/- 1.4 x 8.2 +/- 0.9 **microns**). Trichomonads cultured in TYM medium produced subcutaneous abscess in 9 out of 10 mice, whereas those in TPS-1 medium produced abscesses in 2 out of 10 mice. In SDS-PAGE, trichomonad lysates from both media showed ten common bands. However, trichomonads in TYM medium showed additional bands of 136 kDa, 116 kDa and 40 kDa in comparison to those in TPS-1 with 100 kDa. By immunoblot with T. vaginalis-immunized rabbit sera, T. vaginalis cultivated in both TYM and TPS-1 media showed 5 common bands, and unique bands of 116 kDa, 105 kDa, and 86 kDa were observed in trichomonads in TYM while a 140 kDa band in those in TPS-1. In gelatin SDS-PAGE, trichomonads in TYM degraded gelatin stronger than those in TPS-1. Also protease activity of trichomonads in TYM was significantly higher than that of trichomonads in TPS-1 using Bz-Pro-Phe-Arg-Nan as a substrate. According to the results, it is assumed that the shift from TPS-1 into TYM medium for cultivation of T. vaginalis might modulate the biological and biochemical properties of T. vaginalis in vitro.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: *Culture Media; *Trichomonas vaginalis--metabolism--ME; Electrophoresis, Polyacrylamide Gel; Endopeptidases--metabolism--ME; Gelatin--metabolism--ME; Mice; Mice, Inbred BALB C; Molecular Weight; Protozoan Proteins--isolation and purification--IP; Rabbits; Trichomonas vaginalis--growth and development--GD; Trichomonas vaginalis --pathogenicity--PY

CAS Registry No.: 0 (Culture Media); 0 (Protozoan Proteins); 9000-70-8 (Gelatin)

Enzyme No.: EC 3.4.- (Endopeptidases)

Record Date Created: 19990303

WEST

Generate Collection

L14: Entry 7 of 34 File: USPT Apr 25, 2000

DOCUMENT-IDENTIFIER: US 6054059 A
TITLE: Use of a ceramic metal oxide filter whose selection depends upon the Ph of the feed liquid and subsequent backwash using a liquid having a different Ph

BSPR:
Current regulations by the Environmental Protection Agency require source water to have a certain turbidity or clarity before it is suitable for drinking. These regulations also require the removal or deactivation of viruses and protozoan cysts from the water. Examples of cysts that must be treated are giardia and cryptosporidium. When ingested by humans these cysts can cause serious illness or death. Cryptosporidium cysts range from about 3 to about 5 microns in size and giardia cysts range from about 7 to about 12 microns in size, which makes them difficult to remove efficiently and economically with current filtration systems.

Effects of antimicrobial therapy on sperm-mucus interaction.

Eggert-Kruse W; Hofmann H; Gerhard I; Bilke A; Runnebaum B; Petzoldt D
Division of Gynaecological Endocrinology, Women's Hospital, Heidelberg, FRG.

Human reproduction (ENGLAND) Oct 1988, 3 (7) p861-9, ISSN 0268-1161 Journal Code: HRP
Languages: ENGLISH
Document type: Journal Article
Record type: Completed
Subfile: INDEX MEDICUS

Sperm-mucus interaction under in-vitro or in-vivo conditions might be affected by microorganisms colonizing the reproductive tract. In order to study the influence of antimicrobial therapy, an extensive microbial screening was performed including Chlamydia trachomatis, Mycoplasma hominis, Ureaplasma urealyticum, Neisseria gonorrhoeae, a broad spectrum of potentially pathogenic aerobic and anaerobic bacteria, **Trichomonas** vaginalis, herpes simplex virus and yeasts. One-hundred-and-six couples with a mean duration of infertility of 5.5 years (range 1-12 years) and with isolation of potentially pathogenic microorganisms in semen samples and/or cervical swabs were submitted to a prospective pilot study. None of the patients displayed signs or symptoms of infection in the lower **genital** tract. Before and after specific therapy, based on antimicrobial susceptibility testing, sperm analyses and in-vitro sperm penetration meter tests (SPMT) (Kremer) were performed. SPMT was evaluated with cervical mucus of patients' wives, collected after a standardized oral treatment with oestrogens and, additionally, in a crossed manner with cervical mucus and spermatozoa of fertile donors. The success of antimicrobial therapy was controlled by repeating the same microbial screening and was 96%. However, there was a marked change in the microbial pattern. A comparison of the results of sperm analyses before and after treatment revealed neither significant differences for sperm volume, sperm count, propulsive **motility**, morphology, vitality, pH, fructose concentration or number of **round** cells, nor was there a significant influence on the cervical index and the number of leukocytes in cervical mucus.(ABSTRACT TRUNCATED AT 250 WORDS)

Tags: Female; Human; Male

Ureaplasmal infections of the male urogenital tract, in particular prostatitis, and semen quality.

Weidner W; Krause W; Schiefer HG; Brunner H; Friedrich HJ

Urologia internationalis (SWITZERLAND) 1985, 40 (1) p5-9, ISSN 0042-1138 Journal Code: WRI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Ureaplasma urealyticum is considered an etiologic agent in urogenital tract infections, especially prostatitis. Using the 'four-specimen technique', diagnosis can be based upon significant numbers of these microorganisms. In ejaculate, the critical number seems to be 10(3) cfu/ml of semen to discriminate between real infection and contamination during **urethral** passage. In our study, 46 of 412 samples (11.2%) exceeded this critical number. Most but not all patients suffering from ureaplasma-associated prostatitis established by the 'four-specimen technique' revealed significantly high ejaculate numbers, whereas all samples from patients with prostatodynia and healthy controls had lower numbers. In these cases, numbers of **round** cells in semen, i.e. all leukocytes and spermatides, were significantly increased as compared to prostatodynia. A significantly negative correlation was detected between the numbers of ureaplasmas and zinc concentration in semen, and an almost identically negative correlation to the content of fructose, thus indicating secretory dysfunction of the accessory glands in ureaplasmal infections of the prostate.

Tags: Human; Male

Mycoplasma bovigenitalium in the upper genital **tract of bulls: spontaneous and induced infections.**

Panangala VS; Hall CE; Caveney NT; Lein DH; Winter AJ

Cornell veterinarian (UNITED STATES) Jul 1982, 72 (3) p292-303, ISSN 0010-8901 Journal Code: DRI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Subfile: INDEX MEDICUS

Mycoplasma bovigenitalium, was isolated from vesicular gland **secretions** of a large proportion of clinically normal pubescent bulls. Infections established at this site in 1 to 2 year old bulls sometimes persisted for over a year, induced a local immune response, and were associated in some animals with unacceptably low **motility** of sperm following freezing of semen for artificial insemination. Inoculation of as few as 1000 cfu directly into the vesicular gland sufficed to establish infection but the naturally occurring syndrome could not be successfully reproduced by this method. Intratracheal injection of the organism produced infection of the upper **genital** tract in one of two bulls. The ELISA test was more sensitive than the IHA test in detection of antibodies to M. bovigenitalium in serum or vesicular **secretions** , but its usefulness was limited by extensive cross reactions with other Mycoplasma species.

Preservation of Trichomonas foetus at low temperatures.

Original Title: Conservacion de Trichomonas foetus a bajas temperaturas.

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Revista de Salud Animal vol. 18 (3): p.177-179

Publication Year: 1996

ISSN: 0253-570X --

Language: Spanish Summary Language: english

Document Type: Journal article

Two concentrations (5 and 10%) of dimethyl sulfoxide (DMSO) and 3 of glycerol (5, 10 and 20%) were evaluated as media for cryopreservation of T. foetus. After 20 days the **protozoa** were thawed and cultured in **Diamond** 's medium. Growth of the parasites was evaluated using comparison of proportions and Duncan's test. T. foetus was isolated in all cultures, with significantly greater numbers in the 5% DMSO. T. foetus in DMSO were cryopreserved at temperatures of -4, -20 and -80 deg C and in liquid nitrogen. This allowed preservation of the parasites for 1 week, 1 week, 4 weeks and >24 weeks respectively. 5 ref.

QUANTITATIVE ANALYSIS OF PHAGOCYTOSIS IN PARAMECIUM-CAUDATUM AND SPIROSTOMUM-AMBIGUUM

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JOURNAL: ACTA PROTOZOOL 20 (3). 1981 (RECD. 1982). 255-280. 1981
FULL JOURNAL NAME: Acta Protozoologica
CODEN: ACPZA
RECORD TYPE: Abstract
LANGUAGE: RUSSIAN

ABSTRACT: The influence of variety of physical and chemical factors on the rate of phagocytosis of **diamond** and bentonite particles in P. caudatum and S. ambiguum was studied. The rate of food vacuole formation is independent on dimensions of particles when they are not greater than 5 .mu.m for Paramecium and 7 .mu.m for Spirostomum. The optimum density of both particles and **protozoa** concentrations in the medium, in which the highest rate of phagocytosis occurs, is noted. In more dense concentrations decreasing of phagocytic activity is observed. Experimental relation between mean time (.hivin.t) of 1 food vacuole formation and mean number of particles (.hivin.n) inside vacuole (.hivin.n .times. .hivin.t = constant) is calculated. A working hypothesis of subthreshold stimuli summation is suggested. The single particle of suspension acting as subthreshold stimulus on the receptor inside oral apparatus (cytostome) of the ciliate cannot be effective as a trigger in the process of food vacuole formation. The sum of such single stimuli, when the threshold value is reached, is able to evoke the secretory activity of esophageal fibrils, the mechanism responsible for separation of the vacuole from cytopharynx. On the basis of this hypothesis it is possible to understand the stimulative effect of basic brown G on phagocytosis in S. ambiguum.

Blastocystis hominis--past and future.

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Clinical microbiology reviews (UNITED STATES) Jan 1991, 4 (1) p61-79 , ISSN 0893-8512 Journal Code: CMR

Languages: ENGLISH

Document type: Journal Article; Review; Review, Academic

Record type: Completed

Subfile: INDEX MEDICUS

The history of B. hominis is unique. Few infectious agents have provoked the many misconceptions that plague this enigmatic parasitic ameba. Conflicting descriptions of its nature and pathogenesis have continued throughout the 20th century. As seen by the greatly expanded number of reports in recent years, B. hominis is now a major subject of study, particularly for evidence of disease causation. Physicians are treating patients with intestinal disease caused by B. hominis. Many mild cases resolve in about 3 days without treatment, but others are acute and chronic disease is common. As with E. histolytica, the carrier state is often seen without symptoms. Treatment is usually with **metronidazole** , but emetine (for **refractory** infections), trimethoprim-sulfamethoxazole, and pentamidine are also effective. In fecal samples, this complex protozoan appears in a variety of cell forms which makes microscopic diagnosis difficult. As yet, no specific fluorescent-antibody test is available for diagnosis. A culture method to demonstrate the more easily recognized CB form is available, but probably not feasible for most diagnostic laboratories. The common cell forms are the CB form, the granular (mitochondria) form, and the ameba form. The unexpected size range of these forms in clinical material, from yeast size (ca. 7 **microns**) to giant cells of 20 to 40 microns, makes diagnosis difficult Pseudopodia may be demonstrated by the ameba form in heated microscope stage culture chambers. The anaerobic B. hominis has no cyst form. Its mitochondria are uniquely anaerobic and have no cytochrome protein or oxidative mitochondrial enzymes. Because of its many cell forms and anaerobic mitochondria, B. hominis is an organism of great interest for morphologic and biochemical study. Reproduction is asexual, usually by binary fission. Shizogony occurs in cultured cells. The CB appears to be an organelle whose specific purpose is for reproduction by shizogony. From 2 to 30 progeny are derived from schizogony. The ameba form reproduces by plasmotomy; it has no CB. The pathology of B. hominis infections has been studied in gnotobiotic guinea pigs in which inflammation of the intestinal mucosa and invasion of the superficial layers were seen. Only limited studies of human pathology are available. Those who have studied mucosal histopathology report inflammation and cellular changes that resolve after treatment. More study in this area is strongly indicated (32, 44, 57, 62, 67, 75). Ultrastructural details of B. hominis major forms, except for the schizont, are complete. The organism has no cell wall. The concentric CB takes up as much as 95% of the cell. (ABSTRACT TRUNCATED AT 400 WORDS) (95 Refs.)

Tags: Animal; Human

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L4: Entry 3 of 4 File: USPT Oct 12, 1999

DOCUMENT-IDENTIFIER: US 5965590 A
TITLE: Method for treatment of opportunistic infections with pharmaceutical compositions of tizoxanide and nitazoxanide

BSPR:
Several other species of microsporidia infect HIV-positive patients, including Encephalitozoon hellem and cuniculi, and a new species designated Septata intestinalis. Encephalitozoon hellem, cuniculi and Septata intestinalis have produced disseminated infections with symptoms mainly in the sinus or eyes. A recent report describes several patients with symptomatic and asymptomatic pulmonary microsporidiosis resulting from E. hellem, and suggests that disseminated microsporidia infections are increasing in significance.

DEPR:
Septata intestinalis (tissue culture-derived) organisms were added to the host cells at a 3:1 ratio compared with the estimated host cells or at 15..times.10.sup.6 organisms per well. This ratio resulted in approximately 50% of the host cells becoming infected).